Science GE DOK Alignment Chart **INQUIRY** **Grades 1-2** **GE 1-2**

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Examples/Practice Items
Enduring Knowledge (Scientific Questioning): Students raise scientifically oriented questions that can be answered through observations, experimentation and/or research. At early stages, students learn how to develop investigable questions that guide their work. At later stages, students connect their questions to scientific ideas, concepts, and quantitative relationships that inform investigations.		
All Inquiry GEs are assessed at the state level (NECAP Science)..	**S1-2:1** **(DOK 2)** **Students demonstrate their understanding of SCIENTIFIC QUESTIONING by…**	
DOK 2	· Posing observational **questions** that compare things in terms of number, shape, texture, size, weight, color, motion, etc. (e.g., How fast does a Lady Beetle move compared to a Bess Beetle?).	
	AND	
DOK 2	· Investigating and completing **questions** to identify a variable that can be changed (e.g., What will happen if…? or I wonder if I change…?).	
	AND	
DOK 2	· Generating new **questions** that could be explored at the end of an investigation.	
Enduring Knowledge: (Predicting and Hypothesizing): Scientists' explanations about what happens in the world come partly from what they observe and partly from what they think. Preliminary explanations are constructed with conceptual knowledge and propose a new level of understanding. At early stages, students think about what may happen during an investigation and justify their thinking. At later stages, students identify cause and effect relationships within an hypothesis and base predictions on evidence more than opinion.		
All Inquiry GEs are assessed at the state level (NECAP Science).	**S 1-2: 2** **(DOK 2)** **Students demonstrate their understanding of PREDICTING AND HYPOTHESIZING by…**	
DOK 2	· **Predicting** a logical outcome to a situation, using prior knowledge, experience and/or evidence.	
	AND	
DOK 2	· Explaining reasons for that **prediction.**	

Science GE DOK Alignment Chart **INQUIRY** **Grades 1-2** **GE 3**

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Examples/Practice Items
Enduring Knowledge (Designing Experiments): Students design investigations that control variables, generate adequate data/observations to provide reasonable explanations, and can be reproduced by other scientists. At early stages, experimental design reflects what the experimenter will do to answer a question and ensure that a test is fair. At later stages, students design investigations that will produce the appropriate kinds of evidence to support or refute an hypothesis. Multiple trials or the collection of multiple data points are incorporated into the design and variables are controlled to ensure that the investigation is valid and reproducible.		
All Inquiry GEs are assessed at the state level (NECAP Science).	**S1-2:3** **(DOK 3)** **Students demonstrate their understanding of EXPERIMENTAL DESIGN by…**	
DOK **3**	· Writing a plan related to a **question** that includes: a. What the experimenter will do. b. What will be observed, measured, and/or compared. **AND**	
DOK **2**	· Recording major steps sequentially.	

Science GE DOK Alignment Chart **INQUIRY** **Grades 1-2** **GE 4**

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Examples/Practice Items
Enduring Knowledge (Conducting Experiments): Students follow an experimental design and use scientific tools (including measurement tools) appropriately and accurately. At early stages, students are encouraged to pay close attention to their experimental plan and record data throughout an investigation. At later stages, students engage in extended investigations and use more sophisticated science tools including computers.		
All Inquiry GEs are assessed at the state level (NECAP Science). DOK **2** DOK **1** DOK **2** DOK **2** DOK **2**	**S1-2:4** **(DOK 2)** **Students demonstrate their ability to CONDUCT EXPERIMENTS by…** · Referring to and following a simple plan for an investigation. **AND** · Describing observations using senses rather than feelings (e.g., The snail has a hard shell with wavy, brown lines, rather than the snail is awesome). **AND** · Recording observations of similarities and differences. **AND** · Drawing scientifically: a. Recording relative proportion (e.g., Eyes are approximately the right size when compared to the head) including focus on finer details, and differentiating all parts observed. b. **Labeling** significant aspects of a scientific drawing or diagram with words provided. c. Creating a title for a scientific drawing or diagram. **AND** · Recording data (in a table provided by the teacher) generated from the use of simple science equipment, as well as nonstandard and standard measurement tools.	

Science GE DOK Alignment Chart INQUIRY Grades 1-2 GE 5-8

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Examples/Practice Items
Enduring Knowledge (Representing Data and Analysis): Students represent data using text, charts, tables, graphs.		
All Inquiry GEs are assessed at the state level (NECAP Science). DOK 2 DOK 1	**S1-2:5** **(DOK 2)** **Students demonstrate their ability to REPRESENT DATA by…** · Organizing a collection of data into a table or a graph template. **AND** · Creating a title for a table or graph.	
All Inquiry GEs are assessed at the state level (NECAP Science). DOK 2 DOK 2	**S 1-2:6** **(DOK 2)** **Students demonstrate their ability to ANALYZE DATA by…** · Sorting and classifying objects based upon observations, prior knowledge, or experience and justifying groupings. **AND** · Identifying and describing the **pattern** in diagrams and charts (e.g., model, bar graph, pictograph, diagram or chart).	
All Inquiry GEs are assessed at the state level (NECAP Science). DOK 3	**S1-2:7** **(DOK 2)** **Students demonstrate their ability to EXPLAIN DATA by…** · Developing a reasonable explanation based upon observations (e.g., I found out. . .).	
Enduring Knowledge (Applying Results): Students synthesize the results of an investigation by generating new questions related to the results of the investigation, stating a general rule regarding the understandings learned from the investigation, or applying the understandings learned to similar situations. At early stages, students make connections between classroom investigations and similar situations or experiences. At later stages, students recognize that different explanations can sometimes arise from the same evidence. Students demonstrate an ability to resist overgeneralization based on insufficient evidence and suggest the types of evidence that need to be gathered in order to better understand the focus of the investigation.		
All Inquiry GEs are assessed at the state level (NECAP Science). DOK 2 DOK 2	**S1-2:8** **(DOK 2)** **Students demonstrate their ability to APPLY RESULTS by…** · Generating new **questions** related to discoveries during an investigation. **AND** · Relating a current investigation to a similar investigation.	